

Forces unit overview	Links
<ul style="list-style-type: none"> • Recognize the relationship between: 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Mass and attractive force due to gravity (e.g., force due to gravity on the Earth's surface is proportional to Earth's mass) 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ the force of gravity between two objects and their distance of separation (i.e., the inverse square law) 	
<ul style="list-style-type: none"> • Define gravitational field strength 	text
<ul style="list-style-type: none"> • Solve a variety of problems involving the relationship between 	video
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Mass 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Gravitational field strength 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Force due to gravity (weight) 	
<ul style="list-style-type: none"> • Use Newton's law of universal gravitation to solve problems involving 	video
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Force 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Mass 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Distance of separation 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Universal gravitational constant 	
<ul style="list-style-type: none"> • Analyse situations involving the force due to friction 	
<ul style="list-style-type: none"> • Define static friction and kinetic friction 	
<ul style="list-style-type: none"> • Define normal force 	
<ul style="list-style-type: none"> • Define coefficient of friction 	
<ul style="list-style-type: none"> • Recognize the relationship between force due to friction and the strengths of normal force and coefficient of friction 	video
<ul style="list-style-type: none"> • Solve problems with objects sliding on horizontal surfaces, involving 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ force of friction 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ coefficient of friction 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ normal force 	
<ul style="list-style-type: none"> • Apply Hooke's law to the deformation of materials 	video
<ul style="list-style-type: none"> • State Hooke's law 	
<ul style="list-style-type: none"> • Define spring constant 	
<ul style="list-style-type: none"> • Use Hooke's law to solve problems that involve 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Force 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ spring constant 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ change in length 	
<ul style="list-style-type: none"> • State Newton's three laws of motion 	
<ul style="list-style-type: none"> • Illustrate Newton's first and third laws with examples 	video
<ul style="list-style-type: none"> • Create free-body diagrams in one dimension for use in solving problems 	video
<ul style="list-style-type: none"> • Use Newton's second law to solve problems that involve 	video
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ net force 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ mass 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ acceleration 	
<ul style="list-style-type: none"> • Apply Newton's laws and the concepts of kinematics to solve problems 	